

Amendments to the Claims:

1 - 25. (canceled)

26. (currently amended) A composition for carrying out chemical reactions, comprising

- i) a solution comprising a polymerase;
- ii) $MgCl_2$ and, where appropriate, at least one further alkali metal and/or alkaline earth metal halide;
- iii) deoxyribonucleotide triphosphates (dNTPs);
- iv) at least one primer;
- v) a stabilizer;
- vi) substances for detection of the reaction product; and
- vii) where appropriate further additives,
- viii) wherein said composition is a lyophilizate.

27. (canceled)

28. (previously presented) The composition of claim 26, wherein said chemical reaction is the polymerase chain reaction.

29. (previously presented) The composition of claim 26, wherein said polymerase is a DNA polymerase.

30. (previously presented) The composition of claim 29, wherein said DNA polymerase is Taq polymerase.

31. (previously presented) The composition of claim 26, wherein said further alkali metal metal halide is KCl.

32. (previously presented) The composition of claim 26, wherein said composition comprises two primers.
33. (previously presented) The composition of claim 26, wherein said stabilizer is a disaccharide.
34. (previously presented) The composition of claim 33, wherein said disaccharide is trehalose.
35. (previously presented) The composition of claim 26, wherein the substances for detection of the reaction product are fluorescent dyes.
36. (previously presented) The composition of claim 35, wherein said fluorescent dyes are bound to in each case an anchor oligonucleotide and a sensor oligonucleotide.
37. (previously presented) A unit for preparing reaction mixtures for chemical reactions, comprising an inlet and an outlet, and at least one support, wherein the composition of claim 26 is bound to at least one support.
38. (previously presented) The unit of claim 37, wherein said unit is a cartridge.
39. (previously presented) The unit of claim 37, wherein said chemical reaction is the polymerase chain reaction.
40. (previously presented) The unit of claim 37, wherein said support is a membrane.
41. (previously presented) The unit of claim 37, wherein said composition is a bound as lyophilizate to at least one support.

42. (previously presented) The unit of claim 37, wherein a device for applying elevated pressure or reduced pressure is provided.
43. (previously presented) The unit of claim 37, wherein a capillary is attached above the inlet.
44. (previously presented) The unit of claim 37, wherein one or more additional membranes or supports are present between the inlet and the support to which said composition is bound.
45. (previously presented) The unit of claim 44, wherein four additional membranes are present between the inlet and the support to which said composition is bound.
46. (previously presented) The unit of claim 37, wherein at least one additional support is designed so that polynucleotides can be bound thereto.
47. (previously presented) The unit of claim 46, wherein said additional support is a membrane.
48. (previously presented) The unit of claim 46, wherein said additional support is designed by providing diethylaminoethyl groups.
49. (previously presented) The unit of claim 47, wherein said additional membrane is impregnated with a substance which increases the surface tension of a liquid.
50. (previously presented) The unit of claim 49, wherein said substance which increases the surface tension of a liquid is a polydimethylsiloxane.
51. (previously presented) The unit of claim 44, wherein a substance which absorbs

solids is provided in the space between two membranes.

52. (previously presented) The unit of claim 51, wherein said substance which absorbs solids is Aerosil.

53. (previously presented) The unit of claim 44, wherein the additional membrane located closest to the inlet is impregnated with a lysing agent.

54. (previously presented) The unit of claim 37, wherein a unit for supplying a liquid is provided above the support provided for binding polynucleotides.

55. (previously presented) The unit of claim 54, wherein said liquid is an eluent.

56. (previously presented) The unit of claim 37, wherein said unit for supplying a liquid is separated from the interior of the unit by a membrane, which can be made permeable on application of reduced pressure.

57. (previously presented) A method for preparing reaction mixtures for chemical reactions, comprising the steps:

- a) introducing a sample into the unit of claim 37;
- b) passing the samples through a support to which said composition is bound, so that the finished reaction mixture emerges from the outlet of the unit.

58. (previously presented) The method of claim 57, wherein said chemical reaction is the polymerase chain reaction.

59. (previously presented) The method of claim 57, wherein said support is a membrane.

60. (previously presented) The method of claim 57, wherein between steps a) and b) the additional steps of

- a1) lysis of cells in the sample, and
- a2) separation of the polynucleotides from other sample constituents are carried out.

61. (previously presented) The method of claim 60, wherein said step a1) takes place by contacting the sample with a membrane impregnated with lysing agent.

62. (previously presented) The method of claim 60, wherein said step a2) comprises binding the polynucleotides to a membrane, removal of the other sample constituents and subsequent elution of the polynucleotides from this membrane with the aid of an eluent.

63. (previously presented) The method of claim 62, wherein said eluent is a high-salt solution which comprises no chelating substances.

64. (previously presented) The method of claim 60, wherein in said step a2) the sample is guided through one or more membranes.

65. (previously presented) The method of claim 60, wherein in said step a2) the sample is guided through a substance which absorbs solids.

66. (previously presented) A device for preparing reaction mixtures for chemical reactions, comprising

- a) at least one unit according to claim 62;
- b) at least one reaction device which is connected via an aperture to the outlet of a unit and, after charging with a reaction mixture, can be separated from the sample preparation device.

67. (previously presented) The device of claim 66, wherein said chemical reaction is the polymerase chain reaction.

68. (previously presented) The device of claim 66, wherein said device comprises three units.

69. (previously presented) The device of claim 66, wherein said at least one unit is a cartridge.

70. (previously presented) The device of claim 66, wherein said at least one reaction device can, after the charging with a reaction mixture, be taken out of the sample preparation device and transferred into a device for carrying out and, where appropriate, evaluating said chemical reaction.

71. (previously presented) The device of claim 66, further comprising a device for carrying out and evaluating a chemical reaction, wherein said at least one unit can, after charging of said reaction device, be separated from the remaining device.

72. (previously presented) The device of claim 71, wherein said chemical reaction is the polymerase chain reaction.

73. (previously presented) A method for identifying polynucleotides in a sample, comprising the preparation of a reaction mixture for a polymerase chain reaction in a unit according to claim 62, transferring the reaction mixture into a reaction device and carrying out and evaluating a polymerase chain reaction.

74. (previously presented) The method of claim 73, wherein said polynucleotide is DNA.